

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-17. (Cancelled).

18. (Withdrawn) A method of cutting, comprising:

slicing into tough, fibrous tissue with a slicing edge of a helical knife to draw tissue proximally toward a sharp cutting edge, the slicing edge extending through an opening at least partially bounded by the sharp cutting edge; and
cutting the tough, fibrous tissue with the sharp cutting edge.

19. (Withdrawn) The method of claim 18, wherein cutting the tissue comprises cutting the tissue into discrete pieces.

20. (Withdrawn) The method of claim 18, further comprising providing the helical knife on an inner member and the sharp cutting edge on an outer member.

21. (Withdrawn) The method of claim 20, further comprising transporting the cut tissue along a helical channel defined by the helical knife.

22. (Withdrawn) The method of claim 21, further comprising aspirating the cut tissue through a hollow interior in the inner member.

23. (Withdrawn) The method of claim 22 wherein aspirating the cut tissue comprises aspirating the cut tissue through an opening in a wall of the inner member.

24. (Withdrawn) The method of claim 20, further comprising aspirating fluid through an opening in the outer member.

25. (Currently Amended) A cutting instrument, comprising:

an outer member having an opening at least partially bounded by a sharp cutting edge; and

a helical knife coupled to the outer member for rotation relative to the outer member, the helical knife having an edge configured to slice into tough, fibrous tissue, the edge of the helical knife extending through the opening such that, during use, the edge slices into tough, fibrous tissue to draw the tough, fibrous tissue proximally along the helical knife towards the sharp cutting edge, the helical knife edge being arranged relative to the cutting edge such that the edges align in a plane substantially perpendicular to a longitudinal axis of the instrument to create a shearing action therebetween.

26. (Previously presented) The instrument of claim 25 wherein the edge of the helical knife extends distally through the opening.

27. (Previously Presented) The instrument of claim 25 wherein the sharp cutting edge and the edge of the helical knife are configured to cut tissue therebetween by a shearing action.

28. (Previously Presented) The instrument of claim 25, further comprising:

an inner member received within the outer member, the helical knife being located at a distal portion of the inner member.

29. (Previously Presented) The instrument of claim 28 wherein the inner member defines an aspiration opening, the aspiration opening being located at a proximal portion of the helical knife.

30. (Previously Presented) The instrument of claim 25 wherein the edge of the helical knife comprises a helical edge and the helical knife includes a helical channel.

31. (Previously presented) The instrument of claim 30 wherein the helical channel has a proximal end, a distal end, and a pitch, the pitch of the helical channel increasing from the distal end to the proximal end.

32. (Previously Presented) The instrument of claim 30 wherein a proximal end of the helical channel terminates in an opening through a wall of the inner member.

33. (Previously presented) The instrument of claim 25 wherein the outer member defines a fluid ingress opening through a wall of the outer member in a distal region of the outer member.

34. (Previously Presented) The instrument of claim 25 wherein the sharp cutting edge is located at a distal end of the outer member.

35. (Previously Presented) The instrument of claim 25 wherein the outer member tapers to the sharp cutting edge.

36. (Previously Presented) The instrument of claim 25 wherein the sharp cutting edge comprises a circumferential cutting edge.

37. (Previously Presented) The instrument of claim 36 wherein the sharp cutting edge is circular in shape.

38. (Previously Presented) The instrument of claim 25 wherein the sharp cutting edge is part-circumferential.

39. (Previously Presented) The instrument of claim 38 wherein the sharp cutting edge is circular in shape.

40. (Previously Presented) The instrument of claim 38 wherein the sharp cutting edge is oblong in shape.

41. (Previously Presented) The instrument of claim 25 wherein the outer member includes a shield portion extending distally from the sharp cutting edge.

42. (Currently Amended) A cutting instrument, comprising:
an outer member having an opening at least partially bounded by a cutting edge;
and
an inner member received in the outer member for rotation relative to the outer member, the inner member including a shaft having a helical knife ~~with a V-shaped cross section defining a sharp, slicing edge, the slicing edge having a V-shaped cross section~~ perpendicular to a longitudinal extent of the slicing edge.

43. (Previously Presented) The instrument of claim 42, wherein the helical knife is located at a distal portion of the inner member.

44. (Previously Presented) The instrument of claim 42 wherein a clearance between the inner member and the outer member is in the range of about 0.0005 to 0.002 inches.

45. (Previously Presented) The instrument of claim 42 wherein the inner member defines an aspiration opening, the aspiration opening being located at a proximal portion of the helical knife.

46. (Previously Presented) The instrument of claim 42 wherein the helical knife includes a helical channel.

47. (Previously Presented) The instrument of claim 46 wherein the helical channel has a proximal end, a distal end, and a pitch, the pitch of the helical channel increasing from the distal end to the proximal end.

48. (Previously Presented) The instrument of claim 46 wherein a proximal end of the helical channel terminates in an opening through a wall of the inner member.

49. (Previously Presented) The instrument of claim 42, further comprising a hub coupling the inner member to the outer member.

50. (Previously Presented) The instrument of claim 42 wherein the outer member defines a fluid ingress opening through a wall of the outer member in a distal region of the outer member.

51. (Previously Presented) The instrument of claim 42 wherein the cutting edge is located at a distal portion of the outer member.

52. (Previously Presented) The instrument of claim 42 wherein the outer member tapers to the cutting edge.

53. (Previously Presented) The instrument of claim 42 wherein the cutting edge comprises a circumferential cutting edge.

54. (Previously Presented) The instrument of claim 53 wherein the cutting edge is circular in shape.

55. (Previously Presented) The instrument of claim 42 wherein the cutting edge is part-circumferential.

56. (Previously Presented) The instrument of claim 55 wherein the cutting edge is circular in shape.

57. (Previously Presented) The instrument of claim 55 wherein the cutting edge is oblong in shape.

58. (Previously Presented) The instrument of claim 42 wherein the outer member includes a shield portion extending distally from the cutting edge.

59. (Currently Amended) A cutting instrument comprising:
an outer member having an opening at least partially bounded by a sharp cutting edge; and
a helical knife coupled to the outer member for rotation relative to the outer member, the helical knife configured to slice into tough, fibrous tissue, to draw the sliced tough, fibrous tissue into the opening, and to shear the sliced tough, fibrous tissue that has been drawn into the opening between the helical knife and the sharp cutting edge, the helical knife edge being arranged relative to the cutting edge such that the edges align in a plane substantially perpendicular to a longitudinal axis of the instrument to create the shearing therebetween.

60. (Withdrawn) A method of cutting comprising:
slicing into tough, fibrous tissue with a helical knife that extends through an opening of an outer member, the opening at least partially bounded by a sharp cutting edge;
followed by rotating the helical knife to draw the tough, fibrous tissue toward the sharp cutting edge;
followed by shearing the tough, fibrous tissue between the helical knife and the sharp cutting edge.

61. (Withdrawn) A method of cutting, comprising:

providing a helical knife on an inner member of a cutting instrument and a sharp cutting edge on an outer member of the cutting instrument;

slicing into tissue with the helical knife to draw tissue proximally toward the sharp cutting edge, the helical knife extending through an opening at least partially bounded by the sharp cutting edge;

cutting the tissue with the sharp cutting edge; and

aspirating the cut tissue through a hollow interior in the inner member.

62. (Withdrawn) The method of claim 61, further comprising transporting the cut tissue along a helical channel defined by the helical knife.

63. (Withdrawn) The method of claim 61 wherein aspirating the cut tissue comprises aspirating the cut tissue through an opening in a wall of the inner member.

64. (Currently Amended) A cutting instrument, comprising:

an outer member having an opening at least partially bounded by a sharp cutting edge;

a helical knife coupled to the outer member for rotation relative to the outer member, the helical knife having an edge configured to slice into tissue, the edge of the helical knife extending through the opening such that, during use, the edge slices into tissue to draw the tissue proximally along the helical knife towards the sharp cutting edge; wherein the sharp cutting edge and the edge of the helical knife are configured to cut tissue therebetween by a shearing action; and

an inner member received within the outer member, the helical knife being located at a distal portion of the inner member; wherein the inner member defines an aspiration opening therein, the aspiration opening being located at a proximal portion of the helical knife.

65. (Previously Presented) A cutting instrument, comprising:

an outer member having an opening at least partially bounded by a sharp cutting edge; and

a helical knife coupled to the outer member for rotation relative to the outer member, the helical knife having an edge configured to slice into tissue, the edge of the helical knife extending through the opening such that, during use, the edge slices into tissue to draw the tissue proximally along the helical knife towards the sharp cutting edge; wherein the edge of the helical knife comprises a helical channel having a proximal end, a distal end, and a pitch, the pitch of the helical channel changing from the distal end to the proximal end.

66. (Withdrawn) The method of claim 18, wherein the tough, fibrous tissue comprises cartilage.

67. (Withdrawn) The method of claim 66, wherein the cartilage comprises meniscal cartilage.

68. (Withdrawn) The method of claim 18, wherein the tough, fibrous tissue comprises fibroid tissue.

69. (Withdrawn) The method of claim 68, wherein the fibroid tissue comprises an intrauterine fibroid.

70. (Previously Presented) The instrument of claim 25, wherein the tough, fibrous tissue comprises cartilage.

71. (Previously Presented) The instrument of claim 70, wherein the cartilage comprises meniscal cartilage.

72. (Previously Presented) The instrument of claim 25, wherein the tough, fibrous tissue comprises fibroid tissue.

73. (Previously Presented) The instrument of claim 72, wherein the fibroid tissue comprises an intrauterine fibroid.

74. (Previously Presented) The instrument of claim 59, wherein the tough, fibrous tissue comprises cartilage.

75. (Previously Presented) The instrument of claim 74, wherein the cartilage comprises meniscal cartilage.

76. (Previously Presented) The instrument of claim 59, wherein the tough, fibrous tissue comprises fibroid tissue.

77. (Previously Presented) The instrument of claim 76, wherein the fibroid tissue comprises an intrauterine fibroid.

78. (Withdrawn) The method of claim 60, wherein the tough, fibrous tissue comprises cartilage.

79. (Withdrawn) The method of claim 78, wherein the cartilage comprises meniscal cartilage.

80. (Withdrawn) The method of claim 60, wherein the tough, fibrous tissue comprises fibroid tissue.

81. (Withdrawn) The method of claim 80, wherein the fibroid tissue comprises an intrauterine fibroid.